

I. NOTES ON THE BIRDS OF THE WESTERN PANHANDLE OF OKLAHOMA.

BY GEORGE MIKSCH SUTTON.¹

During the fall of 1932 Mr. John B. Semple of Sewickley, Pennsylvania, a Trustee of the Carnegie Institute of Pittsburgh, invited me to accompany him on an automobile trip to western Oklahoma for the primary purpose of obtaining some specimens of the Lesser Prairie Chicken, *Tympanuchus pallidicinctus*, for the ornithological collection of the Carnegie Museum.

Mr. Semple and I reached Oklahoma on September 18, called at the offices of the State Game and Fish Commission at Oklahoma City, made our way to the prairie chicken country in Ellis County, found the chickens to be not quite in full feather, decided to postpone collecting these until later in the season, and thereupon found ourselves wondering what part of Oklahoma we should visit during the interim at our disposal.

All that we had read in Mrs. Nice's admirable report² upon the Birds of Oklahoma led us to suspect that we should find the Black Mesa country of Cimarron County, in the extreme northwestern corner of the Panhandle, an exceptionally interesting place from the ornithological standpoint. We reached Cimarron County therefore on September 20, established ourselves at the little town of Kenton (about two miles from the New Mexico line), and set to work.

Although neither Mr. Semple nor myself knew much as a result of

¹The author is indebted to the following persons for assistance in the preparation of this paper: Mr. W. E. Clyde Todd, of the Carnegie Museum, Pittsburgh, Pennsylvania; Mrs. M. M. Nice, Columbus, Ohio; Mr. R. Crompton Tate, Kenton, Oklahoma; Mr. James L. Peters, of the Museum of Comparative Zoölogy, Cambridge, Massachusetts; Mr. Joseph H. Riley and Dr. Herbert Friedmann, of the U. S. National Museum, Washington, D. C.; Mr. Wharton Huber, of the Philadelphia Academy of Natural Sciences; Dr. Louis B. Bishop, Pasadena, California; and Drs. Ralph D. Bird and A. I. Ortenburger, of the University of Oklahoma, Norman, Oklahoma.

²NICE, MARGARET MORSE. The Birds of Oklahoma. Revised Edition.—*Publications of the University of Oklahoma Biological Survey*, Volume III, No. 1. pp. 224. University of Oklahoma Press, Norman, 1931.

first-hand experience in Oklahoma, we sensed at once that we should find the bird life about Kenton distinctly different from that of the treeless Panhandle plain we had just traversed. Here we found ourselves suddenly among mountains. On the sides and tops of the mesas about us grew trees we had seen nowhere in more easterly parts of the Panhandle: scrubby oaks, pines, pinyons, and cedars. Here, to our surprise, we encountered no Scissor-tailed Flycatchers, no Crows, no Horned Larks—species we had seen almost everywhere in the central part of the State. Here Canyon Towhees, House Finches, Texas Woodpeckers, and Say's Phoebes were familiar dooryard birds.

We were in the field every day for the following two weeks. So interesting was our every excursion through the cottonwoods that lined the Cimarron, the Carrizoso³ and the Tequesquite,⁴ or through the aromatic conifers of the mesa-tops, that it was with great reluctance that we departed on October 5, making our way back to the prairie chicken country in Ellis County.

Establishing ourselves at Arnett, the county seat, we spent a day or so in pursuit of Prairie Chickens and succeeded in collecting a few specimens with the generous assistance of Mr. Verne E. Davison, local representative of the Game and Fish Commission, and in charge of the Commission's special investigation of the Lesser Prairie Chicken. We left Oklahoma on October 8.

Identifying the material obtained about Kenton proved to be such a fascinating task that we decided to continue our investigations in September of 1933. Arriving again on the 20th, we found the countryside gasping in the clutches of a terrific drouth.

Hot winds from the southwest blew almost incessantly during our ten-day sojourn. Clouds of sand dimmed the horizon, made the sky sullen, robbed the landscape of its color. The Cimarron was reduced to a chain of vicious quicksand holes. No weeds stood along the stream-banks where a year before we had made our way through dense tangles. The cattle that scaled the inhospitable mesa-sides were pitifully bony. Bird life was scarce everywhere, and specimens difficult to obtain. We started homeward on October 1.

During the course of our two expeditions to Oklahoma we obtained

³Pronounced Cár-ris-sos.

⁴Pronounced Têx-a-keet. Mr. Tate informs us that *tequesquite* (or *tesquesquite*) is a Mexican noun for the soda-like formation found about certain water-holes in frontier days. Mrs. Nice (1931) spells the word 'Texakite.'

good series of many western birds for the Carnegie Museum and Cornell University collections, and procured at Kenton certain specimens that proved to be so difficult to identify subspecifically as to indicate a most interesting combination of ecological factors and influences in the Black Mesa country.

Mrs. Nice has given us such a thoroughgoing account of the bird life of Oklahoma that no extensive annotations are needed upon most of the species listed in the present paper. Nor should we attempt a description of the Black Mesa country when such a devoted bird-student as Mr. R. Crompton Tate, of Kenton, is so much better qualified than ourselves to present such a description; when Mrs. Nice herself has given us such a clear concept of the uniqueness of the area insofar as Oklahoma bird life is concerned; and in view of the fact that such institutions as the University of Oklahoma and the Colorado Museum of Natural History have carried on such extensive field-work there prior to the time of our visits.

Once the ornithologist fully comprehends the fact that the Black Mesa is a seventy-five mile long spur of the Rocky Mountains he is not surprised at finding Woodhouse's Jays, Pinyon Jays, Western Tanagers, Canyon Wrens, Townsend's Warblers, and such species about him at Kenton. He is a little bewildered in the fall season, to be sure, for he does not know precisely which of these are transient species and which are summer residents.

Noting the plains-like character of the cactus-dotted lowlands between the mesas, he is not surprised at finding Road-runners, Scaled Partridges, Sage Thrashers, Burrowing Owls, Sparrow Hawks, and Western Meadowlarks.

Remembering that he is far west of the Mississippi River, he expects to encounter Red-naped Sapsuckers, Magpies, Pileolated Warblers, Arkansas Kingbirds, Lewis's Woodpeckers, Red-shafted Flickers, and Western Wood Pewees in the cottonwoods, at least during the period of migration.

But there is an eastern, a very distinctly eastern, element in the bird life about Kenton that at first surprises and confuses. Why these Catbirds, these Yellow-shafted Flickers, these eastern Kingbirds, these eastern Bluebirds, these Baltimore Orioles, that are said to spend the summer and breed? Why these transient Brown Thrashers, Olive-backed Thrushes, eastern Phoebes, Wilson's Warblers, and Least Flycatchers, that are so constantly flitting across the

scene? Mrs. Nice (1931, 26) estimates that one-fifth of the nesting species of the far western Panhandle are "eastern" species.

It must be borne in mind that from the standpoint of number of individuals these eastern forms are decidedly rare. There probably are never more than one or two nesting pairs of Eastern Bluebirds about Kenton during any one summer. The Baltimore Oriole may be somewhat more abundant, though it is exceedingly rare as compared with the Bullock's Oriole. But this "eastern" element in the bird life is always present, apparently; and it is so noticeable that the absence of such an easily recognizable and relatively ubiquitous species as the Crow is scarcely understandable.

A satisfactory explanation of this state of affairs cannot be offered in a breath. We are bewildered when at first we try to decide why any Catbird should seek the Oklahoma Panhandle as a nesting-ground when there are thousands of beautiful gardens waiting for it east of the Mississippi. Or why any Baltimore Oriole that might so easily live about our eastern elms should come to swing its nest from a Cimarron cottonwood.

Were it not for this vast, semi-arid plain that occupies practically the whole of the Panhandle as well as contiguous territory far to the north and south, the presence of these eastern birds would not surprise us. But here lies this all but treeless stretch across which no mountain-inhabiting forms range eastward, and across which most of the characteristic forms of central Oklahoma do not range westward. So definite a barrier is this plain for such sedentary species as the Hairy Woodpecker, White-breasted Nuthatch, and Great Horned Owl, that one race of these species is found to the eastward, another to the westward.

Yet here about Kenton nest these several well-known eastern birds. Have these species extended their breeding range gradually westward, following the clumps of cottonwood that line such streams as the Cimarron? Have they come because of overcrowding in more easterly parts of their range? Do they to some extent follow the trail their ancestors blazed from the east when they migrate? Or have they, by this time, so definitely established themselves in the foothills that they journey straight across Texas to and from their winter homes?

Such questions as these present themselves in rapid succession when we begin thinking along a certain line. But may we not, in suggesting such questions, be making the problem more involved

than it actually is? May we not be disregarding certain important facts concerning the distribution of the species in question?

Just how truly *eastern* are these several species we have mentioned? Upon consulting such a volume as the American Ornithologists' Union "Check-List" we find, somewhat to our surprise, that the Eastern Kingbird nests more or less throughout the area from southern British Columbia, western Mackenzie, and central Manitoba, south to central Nevada and northern New Mexico (1931, 201-202). Can this be the range of an "eastern" bird?

As a matter of fact, all these so-called and so-considered "eastern" species that nest about Kenton nest also to the north and to the north-west of the Oklahoma Panhandle; all of them enjoy comparatively wide breeding ranges; all of them probably have several routes of migration across the United States, one of which very likely lies along the eastern foothills of the Rockies.

Viewing the matter in the light of the above discussion, it then seems probable that these "eastern" species nest about Kenton not because of any overcrowding of range in central or eastern Oklahoma, nor because of some chance local westward extension of range through wind or storm, but rather because certain transient individuals, young birds presumably, en route to long established breeding-grounds to the northward, happen to be in the Kenton region at about the time the nesting urge is strong upon them, find the environment a favorable one in spite of what we think of as its *westernness*, and remain to rear their young. Whether such individuals are following the usual migration routes of their respective species we cannot at present say. The barren appearance of the Panhandle plain leads us still to feel that transient Eastern Phoebes, Least Flycatchers, and Wilson's Warblers at Kenton are a little off the beaten track, but after all it is difficult to be certain about any such matter. The fact that a bird nests regularly, even if rarely, in a certain region, or that it migrates regularly, even if rarely, through a certain region, somehow establishes the propriety of such a nesting and of such a migrating.

The following list includes all species observed or collected by us in Oklahoma during our 1932 and 1933 visits. It does not include several species known to occur in the Kenton region (such species as *Icterus bullocki*, *Aimophila cassini*, and *Asyndesmus lewis*) for the simple reason that we never once encountered these species. The order and nomenclature follow, in the main, that of the American

Ornithologists' Union "Check-List of North American Birds" (1931).

1. *Ardea herodias* Linnaeus. GREAT BLUE HERON.

Solitary Great Blue Herons were noted several times near Kenton in 1932, along the Cimarron, the Carrizoso, and the Tequesquite; and one (an adult) was seen near Hooker, Texas County, on October 5. On September 26 Mr. Semple took an immature bird (sex uncertain) along the Cimarron, near Kenton. We were not able to preserve this specimen, but the head, wing, and foot were saved and the following measurements⁵ taken: exposed culmen, 138 mm.; wing, 485; tarsus, 185.

In 1933 we noted an immature bird at close range along the Tequesquite on September 24. It was feeding on frogs,⁶ which were abundant along the stream.

Mrs. Nice (1931, 55) tells us that the subspecies found in Cimarron County is *Ardea herodias treganzai* Court, but I doubt if subspecific identification of immature Great Blue Herons from this region should be attempted in view of the tendency among herons to wander widely in late summer.

2. *Butorides virescens virescens* (Linnaeus). EASTERN GREEN HERON.

Recorded once, on October 3, 1932, when we took an immature male at the head of Tequesquite Creek. The bird had been slightly injured in the throat as if by flying into a barbed-wire fence. Mrs. Nice (1931, 56) calls the Eastern Green Heron a "summer resident in eastern and central Oklahoma." The species apparently does not breed in the Kenton region.

3. *Nycticorax nycticorax hoactli* (Gmelin). BLACK-CROWNED NIGHT HERON.

Three immature Black-crowned Night Herons were startled from the big cottonwoods at the mouth of the Tequesquite on September

⁵Wing measurements recorded in this paper were taken without pressing the primaries flat and are, therefore, measurements of the *chord* of the folded manus. Tarsal measurements are diagonal, from the middle of the "heel" joint, behind, to the distal margin, in front, of the last undivided tarsal scute.

⁶*Rana pipiens* Schlegel. We collected several specimens along the Tequesquite. These were presented to Cornell University. They were identified by Dr. A. H. Wright.

25, 1932. Our decision that these were of the present species rather than young Yellow-crowned Night Herons, *Nyctanassa violacea* (Linnaeus), was based on the large amount of whitish streaking throughout the plumage.

4. **Branta canadensis** (Linnaeus). CANADA GOOSE.

Several fair-sized flocks of Canada Geese were seen flying over Kenton on September 25 and 26, 1932. Since no specimen was taken the subspecies represented is altogether problematical.

5. **Mareca americana** (Gmelin). BALDPATE.

A female was observed at close range on a pool at the Charles A. Kirtley ranch, about ten miles southwest of Kenton, on September 24, 1933.

6. **Dafila acuta tzitzioha** (Vieillot). AMERICAN PINTAIL.

A pair were seen flying along the Cimarron not far from Kenton, on September 26, 1932.

7. **Querquedula discors** (Linnaeus). BLUE-WINGED TEAL.

Two flocks (three in one flock, six in the other) were seen flying along the Cimarron river-bed about four miles northeast of Kenton, on September 20, 1933.

8. **Querquedula cyanoptera** (Vieillot). CINNAMON TEAL.

Three Cinnamon Teals, two males and a female, apparently, were seen at the head of Tequesquite Creek on September 30, 1932.

9. **Cathartes aura septentrionalis** Wied. TURKEY VULTURE.

In making our way across the State we noted Turkey Vultures here and there almost everywhere save in the relatively treeless stretch between Gate, Beaver County, and western Cimarron County. The species apparently is not regularly so common in the far western Panhandle as in the eastern and central parts of Oklahoma, but we saw a large flock circling over a prairie-dog colony near Kenton on September 21, 1933, and fair-sized flocks upon several occasions—flying about the ranches, sunning themselves in the cottonwoods, or feeding along the highway upon jack rabbits killed by automobiles.

10. **Accipiter velox velox** (Wilson). SHARP-SHINNED HAWK.

Observed here and there in all wooded sections of the State traversed by us; noted almost daily in the vicinity of Kenton, as many as four or five individuals being listed for some days; no flocks or pronounced migratory waves were recorded, however.

Five specimens were collected. In the stomachs of all these were remains of small birds. A large-sized, *brown-colored* female shot on October 4, 1932, was somewhat laboriously carrying in her talons the body of a Western Meadowlark.

11. **Accipiter cooperi** (Bonaparte). COOPER'S HAWK.

Recorded six times during 1932: near Laverne, Harper County, on September 20; near Arnett, Ellis County, on the same date; at Kenton, Cimarron County, on September 25 (two seen; a male that was chasing a flicker shot); on September 30 (one seen); on October 1 (one seen); and at Optima, Texas County, also on October 1 (an adult male found dead along the highway).

Recorded twice in 1933: at Kenton, on September 21; and at the J. J. Willson ranch, twelve miles northeast of Kenton, on September 23 (an immature female shot).

12. **Buteo borealis** (Gmelin). RED-TAILED HAWK.

Red-tailed Hawks observed here and there in wooded sections east of the Panhandle may have been of the eastern race, *B. b. borealis*; but individuals found dead along the highway in Beaver and Texas Counties or collected in Cimarron County were certainly Western Red-tails, *B. b. calurus* Cassin.

In 1932 the species was recorded almost daily. On September 20 remains of an immature and an adult bird were found near Forgan, Beaver County. On October 1 several were seen near Kenton; one was observed in the act of capturing a prairie-dog; and an exceptionally fine adult female was shot late in the evening as it flew out from a cottonwood in which it had gone to roost. In the stomach and crop of this bird were remains of a cottontail rabbit. On October 6 a few were noted in the vicinity of Arnett, Ellis County.

In 1933 the species was recorded a few times. On September 20, a very dark bird was seen twelve miles east of Kenton. On September 30 a dead male was examined along the roadside near Hooker, Texas County.

13. *Buteo swainsoni* Bonaparte. SWAINSON'S HAWK.

Noted many times during 1932 from the vicinity of Seiling, Dewey County, westward. On September 20 we observed about twenty individuals along the Panhandle highway, one of these appearing to be solid black. A female in light phase of plumage was found dead near Optima, Texas County, on the same date. In 1933, three were noted near Kenton on September 21, and five were seen circling gradually southward on September 23.

14. *Buteo regalis* (Gray). FERRUGINOUS ROUGH-LEG.

Noted most frequently along the Panhandle highway, where the magnificent birds perched on the telegraph-poles and fence-posts and fed upon jack rabbits killed by automobiles; rare in the vicinity of Kenton, being seen by us but once there, on September 30, 1932, at a prairie-dog colony near the mouth of the Tequesquite.

In 1933 we did not observe the species at all on our way westward to Kenton; but on our way out, on October 5, we saw many of them near Boise City, Cimarron County; Guymon, Texas County; and Forgan, Beaver County.

On October 1, 1933, we took a large female ten miles west of Guymon, Texas County—one of several seen along the Panhandle highway.

15. *Aquila chrysaëtos canadensis* (Linnaeus). GOLDEN EAGLE.

Fairly common, for so large a bird, in the Black Mesa country; observed several times along the Panhandle highway; three nests noted in the vicinity of Kenton.

On October 1, 1932, we watched one as it flew down from a mesa to roost in a high clump of walnut trees along the Tequesquite. On October 5, 1932, we noted one along the highway near Forgan, Beaver County, eating a jack rabbit. On September 23, 1933, a pair and their two young were seen circling the northern rim of the Black Mesa. Mr. Tate knew the location of this pair's nest.

On September 29, 1933, Mr. Semple shot a large female bird not far from the Charles A. Kirtley ranch-house, about ten miles southwest of Kenton. On the same date I witnessed a memorable aerial combat between two eagles that appeared to be tormenting and at the same time fighting over another eagle that was somewhat piebald in appearance and a little uncertain in flight. When I first saw these

eagles all three of them were flying majestically toward a distant mesa. All at once two of the birds began diving fiercely at the other bird and this clumsy individual (perhaps a young one) made its way to the side of the mesa, where it hobbled about among the brush, dodging the repeated attacks of the birds in the air. Finally the two flying birds came to grips, grasped each other's feet with legs stretched far out, and whirled earthward in a series of breath-taking revolutions, catching themselves apparently just before they struck the rocks.

Later in the evening I came upon two eagles (perhaps the same birds) asleep side by side on a high cottonwood along the Tequesquite.

We had occasion to examine several trees where eagles had been roosting. Here feathers were scattered about and the ground was liberally coated with whitewash.

16. *Circus hudsonius* (Linnaeus). MARSH HAWK.

Observed daily during both visits. Not so common as Swainson's Hawk along the Panhandle highway, and never seen perching on fence-posts or telegraph-poles.

On October 6, 1932, near Arnett, Ellis County, many were seen coursing over the low "shinnery" oak in the prairie chicken country. On September 20, 1933, an immature male was collected near Kenton, Cimarron County. In the stomach were remains of a frog. On September 26, 1933, a large female bird was observed diving into a flock of turkeys on the Willson ranch northeast of Kenton.

We occasionally experienced some difficulty in distinguishing light-plumaged Swainson's Hawks from blue-gray male Marsh Hawks, for the white upper tail coverts were noticeable in flight in both species, and the Swainson's Hawk sometimes hunted by beating back and forth not far from the ground, much in the manner of the slenderer, more buoyant species.

17. *Pandion haliaëtus carolinensis* (Gmelin). OSPREY.

One seen near Seiling, Dewey County, on September 19, 1932, flying upstream along the North Canadian River.

18. *Falco mexicanus* Schlegel. PRAIRIE FALCON.

Observed on four dates in 1932, in the western Panhandle: September 22 and 30 (one, near Kenton); October 4 (two, eight miles

east of Kenton); and October 5 (one, near Kenton; one near Boise City, Cimarron County).

Observed on two dates in 1933, near Kenton: September 23 (one, perched on the ground along the base of the north side of the Black Mesa); and September 27 (two, flying about the rim of a mesa about four miles east of Kenton).

19. *Falco sparverius* Linnaeus. AMERICAN SPARROW HAWK.

Observed almost daily during both our visits; common along the highways, even in the treeless portions of the Panhandle; seen frequently about the mesas, perching on prominent pinnacles, where they kept sharp lookout for prey.

It is our present opinion that all the Sparrow Hawks of Oklahoma belong to the well-known eastern race, *F. s. sparverius*, in spite of the fact that Mrs. Nice (1931, 78) calls the Desert Sparrow Hawk, *F. s. phalaena* (Lesson), a "resident in western Oklahoma." We collected four specimens in the Kenton region expressly in the hope of procuring *phalaena* in fresh fall plumage; but these four birds, when compared with the Carnegie Museum's considerable series, prove plainly to be of the eastern race. One male bird, taken September 28, 1933, is in the moult. The new feathers are rich and dark as in typical *sparverius*, but the old feathers are exceedingly pale and faded in appearance, of just such a shade as might be expected in a desert form. The appearance of this specimen leads me to wonder if the race *phalaena* may not be, as Dwight⁷ has suggested, merely *sparverius* in the more arid portions of its range, the midsummer feathers faded and worn and paled in such a manner as to give the effect of sub-specific distinctness.

There is a remote chance, of course, that we took transient rather than resident individuals near Kenton, but such a state of affairs presupposes an earlier and a more definite migration of the species in this region than customarily takes place in other parts of its range.

20. *Tympanuchus pallidicinctus* (Ridgway). LESSER PRAIRIE CHICKEN.

We encountered this interesting species only during 1932 when, with the generous coöperation of the State Game and Fish Commission, we observed it near Arnett, Ellis County. When we first saw

⁷DWIGHT, JONATHAN. Plumage Wear in its Relations to Pallid Subspecies.—*Auk*, XXII, 1905, 35-36.

the chickens, on September 19, they were in the midst of the moult, many of them having stubby tails and very short pinnæ. They were living in the cut-over "shinnery" oak country where Mr. Davison gave them his personal care.

When we returned to Arnett to collect a few specimens on October 6, we found the birds still not in full feather. So carefully had Mr. Davison been tending his charges that many of them were feeding in an open field not far from his house.

In crops examined were weed-seed and small acorns. Mr. Davison is preparing an exhaustive report upon this rare and little known species which will, we trust, have much to do with saving it for future generations. Though we were told that Lesser Prairie Chickens are still to be found in various parts of the Panhandle, notably to the south of Boise City, Cimarron County, we did not see any along the highway in that region, nor did we hear of any in the vicinity of Kenton.

21. *Colinus virginianus* (Linnaeus). BOB-WHITE.

Recorded at three localities: Arnett, Ellis County, a large covey along an unimproved road three miles east of town, September 19, 1932; Laverne, Harper County, a male dead along the highway, October 5, 1932; and Kenton, Cimarron County, several coveys seen and one male specimen, in the moult, collected near the New Mexico line, September 20, 1933.

On September 28, 1933, a female with several very small young, all able to fly well, was flushed from the dense weed-growth along a small stream on the D. H. Hallock ranch, fifteen miles northeast of Kenton.

According to Oberholser (see Nice, 1931, 81) "all the bob-whites of Oklahoma are to be referred to *C. v. virginianus*, though some are intermediate." Our single male specimen from Kenton appears to be not quite typical of eastern *virginianus* and may represent the subspecies *taylori*, described by Lincoln⁸ from eastern Colorado. In view of the fact that the Panhandle plain is known to interrupt the range of so many sedentary species it seems quite possible that the Bob-white of western Cimarron County is subspecifically distinct from that of central Oklahoma or of the extreme eastern end of the Panhandle.

⁸LINCOLN, FREDERICK C. Description of a New Bob-white from Colorado. — *Proceedings of the Biological Society of Washington*, XXVIII, 1915, 103-104.

22. **Callipepla squamata pallida** Brewster. ARIZONA SCALED QUAIL.

Observed daily in the Kenton region, where it was common on the mesa-slopes and in the cactus-dotted valleys; not seen by us elsewhere in the State.

During the period of our visits to Kenton these quail were moulting. On October 3, 1932, we collected six specimens. Most of these proved to be immature. Their crops and stomachs were full of small, yellow-green, black-spotted beetles. On September 23, 1932, we came upon females with young only a few days old, yet able to fly well. Most of the coveys we encountered were large, numbering sometimes forty birds or more.

We often had difficulty in forcing these nimble-footed creatures to take wing. Lifting their heads in an assured manner they would streak off through the thin grass, flying only when confronted with a wall of rock or when suddenly pressed too closely.

23. **Grus canadensis canadensis** (Linnaeus). LITTLE BROWN CRANE.

So far as we know, no specimen of the present subspecies has actually been taken in the Oklahoma Panhandle, so there is some doubt in our mind as to the precise form or forms represented in the huge flocks of cranes that flew over Kenton during our visits in the region.

In 1932 cranes were first noted by us on September 26 (three seen). On September 28 a flock of ten flew over. On October 1 hundreds of birds passed over the town, calling loudly, the great creatures flying almost abreast in lines that stretched far across the sky. On October 2 we watched a flock of about a hundred birds as they alighted on the north bank of the Cimarron. We crawled forward on hands and knees through unspeakably painful sand-burrs, trying to get a shot, but the tall birds were too wary and took wing with a majestic trumpeting.

Huge flocks of cranes passed southward both by night and by day in 1933, during the period from September 23 to 29.

24. **Oxyechus vociferus vociferus** (Linnaeus). KILLDEER.

Noted at several points in the State *en route* to and from Cimarron County, notably at Shattuck, Ellis County, where, on October 5, 1932, we observed a flock of about thirty individuals.

Recorded several times near Kenton during both 1932 and 1933.

On September 24, 1933, a large flock was seen along the Cimarron about a mile north of Kenton.

25. **Capella delicata** (Ord). WILSON'S SNIPE.

A female specimen was taken at the head of Tequesquite Creek on October 3, 1932. Another snipe was seen at almost the same spot on the following day. Neither grass nor sedge grew along the margins of this stream, but the banks were so high and the stream itself so hidden from view that such species as this found some manner of shelter at the water's edge.

26. **Tringa solitaria** Wilson. SOLITARY SANDPIPER.

A Solitary Sandpiper was seen at the head of Tequesquite Creek on September 30, 1932. Since the specimen was not collected the subspecies is problematical, through it is probably safe to assume that it was a Western Solitary Sandpiper, *T. s. cinnamomea* (Brewster).

The absence of shore birds about Kenton during our visits was not so much a matter of scarcity of water as it was lateness of season. Mr. Tate told us that had we come earlier we might have recorded several additional species, notably the Long-billed Curlew, *Numenius americanus* Bechstein, which nests in considerable numbers in the region.

27. **Totanus flavipes** (Gmelin). LESSER YELLOW-LEGS.

Recorded twice: on September 18, 1932, eight miles east of Arnett, Ellis County, where four birds were seen feeding about a little roadside pool; and on September 23, 1932, when a flock of fifteen birds was seen along the Cimarron River, about five miles northeast of Kenton.

28. **Columba livia** Gmelin. ROCK DOVE.

Domestic pigeons in the Black Mesa country have so widely reverted to a naturalized state that they are to be found nowadays about the wildest gorges and pinnacles far from the ranches, towns, and highways. We repeatedly saw such pigeons along the cliff-like portions of the northern face of the Black Mesa, about the caves of the famous Basket-Maker Indians, and in wild gulches miles back from the highways, southeast of Kenton. In the caves we found

remains of nests, noted much whitewashing about the walls, and heard squabs hooting in the niches and recesses in the smoke-stained rock above us.

Many of the birds observed were "blue," having much the appearance of the species in its original plumage. But others had white patches on their wings, and one was largely white, with blackish feathers in the wings and tail. We saw no brown-colored bird anywhere. Mr. Tate was not able to give us any definite information as to how long these pigeons have been seen about Kenton. The town was established at about the close of the Nineteenth Century, but the pigeons might have wandered from Boise City or from some other settlement and established themselves long before the first house in Kenton was built.

29. *Zenaidura macroura marginella* (Woodhouse). WESTERN MOURNING DOVE.

Noted throughout all parts of the State traversed by us; especially abundant in Lincoln and Creek Counties, and not so common in the treeless Panhandle plain as in the vicinity of Kenton. Mrs. Nice (1931, 99) tells us that the present subspecies ranges across the entire State. We did not collect a specimen.

30. *Coccyzus americanus* (Linnaeus). YELLOW-BILLED CUCKOO.

Noted by us only in the vicinity of Kenton: on September 30, 1932, when a moulting individual was noted in some grape-vines along the Tequesquite; again on September 24, 1933, at the John Regnier ranch, six miles south of Kenton, where two birds were seen in the trees about the house. Mr. Regnier told us the birds had nested in the vicinity.

Mrs. Nice (1931, 102) is of the opinion that the well-known eastern subspecies, *C. a. americanus*, ranges throughout the State. We did not take a specimen.

31. *Geococcyx californianus* (Lesson). ROAD-RUNNER.

Recorded by us only in the vicinity of Kenton, where we saw it almost every day. Several specimens were collected, all in the moult. A male, taken as late in the season as October 1, 1932, was in exceedingly poor feather, only four of the rectrices being of full length.

Stomachs examined contained large grasshoppers for the most part, without sign of feathers or of reptilian scales.

Upon one occasion we pursued a Road-runner with the automobile. The bird finally took refuge in a clump of cactus where, in a safe retreat only a foot or so from us, it looked fiercely out, its brilliant eyes flashing.

32. *Otus asio* (Linnaeus). SCREECH OWL.

We recorded two subspecies of this owl during the course of our field-work. Remains picked up along the highway near Vinita, Craig County, on September 18, 1932, prove to be of the well-known northeastern race, *O. a. naevius* (Gmelin), in the gray phase of plumage.

The subspecies represented by an individual seen at night near Arnett, Ellis County, on October 5, 1932, is problematical.

The subspecies found in the far western Panhandle is apparently *O. a. aikenii* (Brewster) as Mrs. Nice tells us (1931, 104), but in the vicinity of Kenton the bird is very rare and we worked diligently in procuring our single specimen—a male, taken from a dense clump of grape-vines along the Tequesquite on October 3, 1932. We recorded Screech Owls near Kenton on two other dates: October 1, 1932, when two birds were seen flying among willow trees late in the evening; and September 20, 1933, when one was seen at night, perched on a fence-post along the highway about six miles east of Kenton. We never once heard a Screech Owl in the Black Mesa country. Since we heard Great Horned Owls every night it occurred to us that the abundance of this larger species may have had a considerable bearing upon the scarcity of the smaller one.

In identifying our Kenton specimen—a gray bird—I borrowed four *Otus asio* from Oklahoma (University of Oklahoma Museum) and one from Colorado Springs, Colorado (U. S. National Museum). Among these are three specimens (two gray; one red) that apparently are referable to the subspecies *aikenii*. Our Kenton bird is decidedly grayer (less brownish, that is) than either of the comparable specimens at hand, and it bears a closer resemblance to the Colorado specimen (gray) than to the gray bird from Oklahoma (Cleveland County). The grayness of the Kenton bird is probably due in part to freshness of plumage, for in this specimen the postnuptial moult has obviously just been completed.

33. *Bubo virginianus* (Gmelin). GREAT HORNED OWL.

Recorded by us only in the far western Panhandle, where we found it surprisingly common in the wooded canyons and cottonwood groves about Kenton, Cimarron County. We saw it almost daily, heard it hooting every night, and took a series of nine specimens. Mr. Semple examined the stomachs of these, finding four to be empty, two to hold remains of cottontail rabbits, and three to contain remains of fish and crayfish.

Mrs. Nice (1931, 105) lists *Bubo virginianus virginianus* and *Bubo virginianus occidentalis* as the races of this species found in Oklahoma, calling the latter an "uncommon resident in central and western parts." I have compared our Kenton specimens with a series of *virginianus* from several parts of the eastern United States and of *occidentalis* (from North Dakota, Minnesota, Alberta, and elsewhere) and find them to be plainly different from both these races. They are too small and too pale for *virginianus*; and they are too small, too dark, too brown, and too finely marked for *occidentalis*, having brownish or ochraceous marking on the scapulars rather than coarse white or whitish markings, as in *occidentalis*. They are, in some respects at least, closer to *pallescens* (a subspecies not mentioned by Mrs. Nice) than to either of the above-named forms.

Bubo virginianus pallescens appears to be an exceedingly variable race, some individuals being decidedly gray above and whitish below, others being rather decidedly brown above, with a considerable admixture of brown or ochraceous below. Examination of a considerable series of Horned Owls from New Mexico, Arizona, and northern Mexico leaves me, in fact, under the impression that *pallescens* is, as Oberholser⁹ suggests, a dichromatic race. There is in the collection of the Museum of Comparative Zoölogy at Cambridge a very small and very gray bird (male, Thayer Collection No. 2807), supposedly *pallescens*, from Mound Valley, Chihuahua, that is so small and gray as to suggest the possibility of a distinct race in that part of Mexico. There are in this same collection, on the other hand, much larger and browner individuals, also supposedly *pallescens*, from more northerly regions.

⁹OBERHOLSER, HARRY C. A Revision of the American Horned Owls.—*Proceedings United States National Museum*, XXVII, No. 1352, 1904, pp. 177 and 182.

For the present it seems best to call our Kenton birds intermediate between *virginianus* and *pallescens*, closer perhaps to the latter. Only one of them (GMS No. 5197) has the distinctly whitish feet said to be characteristic of *pallescens*. The feet in the other specimens are more brownish, either as a result of patches of brownish feathers or as a result of general coloration throughout, although in no case are they nearly so brown or tawny as in average *virginianus*.

Stone, in his original description¹⁰ of *Bubo virginianus occidentalis*, gives us the following measurements for the type-specimen, "probably a female": exposed culmen, 1.8 in. (46 mm.); wing, 16 in. (406 mm.); tarsus, 2.5 in. (64 mm.). A comparison of these measurements with those presented in the table below will show how small our Kenton birds are:

MEASUREMENTS¹¹ (IN MILLIMETERS) OF BUBO VIRGINIANUS
FROM KENTON, OKLAHOMA.

GMS No.	Sex	Exposed Culmen (with cere)	Wing	Tail	Tarsus
4658	♂	36	348	210	55
4659	♂	38	338	220	59
5192	♂	37	358	214	53
5197	♂	37	347	212	54
5198	♂	35	339	201	53
5225	♂	38	343	202	50
4579	♀	39	362	224	60
4635	♀	41	370	230	63
5191	♀	42	383	225	58

It is my present opinion that if *B. v. occidentalis* is found in Oklahoma at all it is found only irregularly, and in winter. This opinion is based first upon our discovery that the nesting Horned Owls of the Kenton region assuredly are not *occidentalis*; and secondly upon the determination that the specimen of *occidentalis* listed by Mrs. Nice from Creek County (May 12) is, in reality, not *occidentalis*, but

¹⁰STONE, WITMER. A Revision of the North American Horned Owls with Description of a New Subspecies.—*Auk*, XIII, 1896, 155.

¹¹The culmen measurements include the cere because Stone's measurements of *occidentalis* were apparently made in this manner. Tarsal measurements were taken from the proximal end of the heel pad, behind, down the posterior side of the tarsus, to the insertion of the smallest toe. Diagonal measurement is unsatisfactory because it is so difficult to locate the base of the middle toe among the thick plumage of the front of the foot.

eastern *virginianus*. After finding that our Kenton birds were close to *pallescens* I wrote Dr. Ralph D. Bird, of the Museum of Zoölogy at the University of Oklahoma, asking if the Creek County specimen were yet extant. Dr. Bird promptly sent the specimen in question on, together with three other Oklahoma Horned Owls. To my surprise I found the Creek County specimen to be a young bird, not long out of the nest. Subspecific identification of such a young bird is not an easy task. It is evident, however, that the comparable plumage of the back, wings, tail and sides is too dark, too brown, and too finely marked for *occidentalis*; and the appearance of the scapulars, in particular, is that of *virginianus* rather than of *occidentalis*. To my way of thinking, then, a specimen of *occidentalis* has yet to be taken in Oklahoma, for the other three specimens forwarded by Dr. Bird are plainly *virginianus* and had been so identified.

34. **Speotyto cunicularia hypugaea** (Bonaparte). WESTERN BURROWING OWL.

At Kenton we found this species rare, recording it on only four dates during the course of our two visits. It was first seen on September 30, 1932, when a single bird flew up from a burrow at the edge of a prairie-dog colony near the mouth of the Tequesquite.

On October 4, 1932, we collected a male a short distance northwest of Kenton near the New Mexico line.

On September 28, 1933, we took a female at night, along a road northeast of Kenton.

On September 28, 1932, we observed one flying out from the rocks and catching insects flycatcher-wise, not far from the Kirtley ranch-house, ten miles southwest of Kenton.

We recorded the species at only one other point in the State: in the vicinity of Arnett, Ellis County, where, in an almost grassless pasture about nine miles east of town, we encountered several Burrowing Owls (perhaps a family group) and succeeded in procuring one specimen, a male, on October 7, 1932.

35. **Asio wilsonianus** (Lesson). LONG-EARED OWL.

Recorded only at Kenton. On October 1, 1932, we took a female from the cottonwoods along the Cimarron River about six miles northeast of Kenton. On October 3, 1932, we noted a very drowsy

individual several times among the grape-vines at the head of the Tequesquite. We had amusing difficulties in making this bird fly.

36. *Phalaenoptilus nuttalli nuttalli* (Audubon). NUTTALL'S POOR-WILL.

Curiously enough, we did not record this species at all during our 1932 visit. In 1933 we saw it several times and collected two specimens near Kenton, Cimarron County.

On September 20, 1933, the headlights of our automobile shone the eyes of a Poor-will that was resting at the roadside about a mile east of Kenton. We observed this bird catching insects. It flew about recklessly, plunging this way and that, sometimes darting straight toward the ground as if pouncing upon a ground beetle or some other terrestrial creature.

On September 25 we collected a male that was resting full in the sun on a rough mesa-side about six miles northeast of Kenton. When this bird flew up it dashed down the slope at amazing speed, catching itself just in time to avoid hitting rocks and flopping this way and that as if bent on self-destruction. We saw another Poor-will on this date, after dark.

On September 26 we took a male that was resting in the shade of some thin brush high on a mesa-side just beneath the uppermost cliff-like rim. This bird fluttered up gently, just missing the tips of the branches as it darted between the boulders and dropped to rest a short distance away.

On the evening of September 26 we hunted Poor-wills with a strong flashlight. Although we did not get another specimen we had the pleasure of locating one bird and of following it with our light as it flew away. As long as we could see the bird at all its eyes reflected a brilliant pale pink or reddish light, startling in contrast to the darkness all about us.

37. *Chordeiles minor* (Forster). NIGHTHAWK.

During 1932 we saw Nighthawks only at Kenton, Cimarron County: one on September 23, three on the following evening; two on September 30; and one on October 1 (Tate). During 1933 we recorded the species only once, near Kenton, on September 28. These probably were not Eastern Nighthawks, *C. m. minor*, but which of

the western subspecies was represented is a matter for conjecture, since no specimen was taken.

38. **Chaetura pelagica** (Linnaeus). CHIMNEY SWIFT.

A large flock were seen on September 19, 1932, flying about the town of Arnett, Ellis County. Not noted in 1933.

HUMMINGBIRD, species. On September 27, 1932, at the Regnier ranch-house, six miles south of Kenton, we saw a hummingbird feeding among the flowers of scarlet salvia that were growing about the house. The bird was dull-colored. We caught no gleam of bright color from the throat. It was probably a female or an immature bird. According to Mrs. Nice's list (1931, 110) the Broad-tailed Hummingbird, *Selasphorus p. platycercus* (Swainson), is to be expected in the Kenton region, but we are not acquainted with this species in life and were not, therefore, in a position to identify it with certainty.

39. **Megasceryle alcyon alcyon** (Linnaeus). EASTERN BELTED KINGFISHER.

Noted at several points in the State, though not on the Panhandle plain; observed daily in the Kenton region, where two specimens were taken: an immature female, September 24, 1932; and a male, September 28, 1933. On September 20, 1932, one was seen to capture a frog from the muddy margin of the Tequesquite. In accomplishing this obviously difficult feat the bird could not plunge into the water, but had to snap at its victim with its beak, flycatcher-wise, while in flight.

40. **Colaptes auratus** (Linnaeus). FLICKER.

Unfortunately we failed to collect specimens of the present species anywhere in the State, though we recorded it at several points in northeastern and central parts, and identified it carefully at Arnett, Ellis County (two seen, October 6, 1932) and in the vicinity of Kenton, Cimarron County, where it was seen three times in 1932 (September 29, October 1 and October 2) and three times in 1933 (September 21: two individuals seen; September 24 and September 28).

We noted no evidence of hybridization between *auratus* and *cafer* in the western Panhandle, though the two species were usually found thereabouts in the same clumps of trees; but in the vicinity of Laverne, Harper County, and at Gate, Beaver County, several individuals with strongly orange wings and with other marks of cross-breeding were observed.

41. ***Colaptes cafer collaris*** Vigors. RED-SHAFTED FLICKER.

In making our way westward in 1932 we recorded this species first near Vici, Dewey County, and found it common near Laverne, Harper County, where *C. auratus* × *C. cafer* hybrids were noted.

At Kenton, Cimarron County, we found it abundant in the cottonwoods, observing from ten to sixty individuals every day, many of them going about in what appeared to be family groups. A total of four specimens was taken; and none of these shows evidence of hybridization.

In returning east, in 1932, we definitely identified this species last at Gate, Beaver County.

42. ***Melanerpes erythrocephalus*** (Linnaeus). RED-HEADED WOODPECKER.

Noted at several points along our route to and from Cimarron County; not seen on the Panhandle plain, however.

Observed several times near Kenton; in 1932 on September 20 (a pair and their brood of young in a dead cottonwood near the Tequesquite) and on September 26, when several were seen and a male taken at the mouth of the Tequesquite; in 1933 on September 20 (one), on September 23 (two young), on September 24 (two young at the Kirtley ranch, southwest of Kenton), and on September 29 (one young, along the Tequesquite).

43. ***Sphyrapicus varius nuchalis*** Baird. RED-NAPED SAPSUCKER.

Mrs. Nice (1931, 113) calls this sapsucker an "accidental visitor from the west." In the light of our experience at Kenton, Cimarron County, this statement must apply only to the main body of the State, for the bird is apparently regular and common as a transient in the Black Mesa country.

We took four specimens in all: in 1932 a female, September 25; in 1933 a female, September 26; and two males, September 29. The species was first recorded on September 21 during both years. At the Willson apple orchard (twelve miles northeast of Kenton) the trees had been so densely perforated by sapsuckers as to convince us that the bird is often downright abundant thereabouts, and also, probably, somewhat of a nuisance.

According to Mrs. Nice (1931, 114) this subspecies has actually been taken in Oklahoma but once heretofore, in Latimer County.

44. *Dryobates villosus* Linnaeus. HAIRY WOODPECKER.

Hairy Woodpeckers recorded by us near Pawhuska, Osage County, and Bartlesville, Washington County, were presumably of the well-known eastern race, *D. v. villosus*.

In the far western Panhandle we recorded the species only twice and took the only individuals encountered, both males: September 22, 1932, among the conifers on a mesa-top three miles east of Kenton, Cimarron County; and September 26, 1933, in the high cottonwoods near the Willson ranch-house, twelve miles northeast of Kenton.

These two male birds prove to be close to *D. v. leucothorectis* Oberholser, or intermediate between this race and *D. v. monticola* Anthony. They are a trifle larger throughout than four male *leucothorectis* from New Mexico and Arizona in the U. S. National Museum, and, being in fresher plumage than most of these, are blacker above, especially on the wings. On the other hand they are rather small for *monticola*, according to Anthony's original description of "*Dryobates villosus montanus*."¹²

MEASUREMENTS¹³ (IN MILLIMETERS) OF *DRYOBATES VILLOSUS*
FROM CIMARRON COUNTY, OKLAHOMA.

GMS No.	Sex	Culmen	Wing	Tail	Tarsus
4559	♂	27	131	..	23
5215	♂	27	129	..	22.5

According to Mrs. Nice's list (1931) the White-breasted Hairy Woodpecker has not heretofore been recorded from Oklahoma.

45. *Dryobates pubescens* (Linnaeus). DOWNY WOODPECKER.

The Downy Woodpecker is a rare bird in the Black Mesa country. We finally succeeded in collecting three specimens, all females, ap-

¹²ANTHONY, A. W. A New Subspecies of the Genus *Dryobates*.—*Auk*, XIII, 1896, 31-34.

¹³Measurements of the bill are from the tip of the upper mandible to the anterior margin of the nostril, as in Anthony's description of *monticola*. Tail measurements are omitted because the middle rectrices are not fully developed in our specimens. Tarsal measurements given here appear to be very large as compared with those for Anthony's type specimen of *monticola*, but this is possibly because Anthony measured the tarsus differently—from the edge of the tibial feathering to the distal margin of the last tarsal scute.

parently the first to be taken in the region, and all in clean, fresh plumage. These were taken on September 24 and October 1, 1932, and September 26, 1933; the first two along the Cimarron, three miles east of Kenton, the last at the Willson ranch, twelve miles northeast of Kenton.

These three specimens, upon comparison with the Carnegie Museum's considerable series of *Dryobates pubescens*, prove to be somewhat intermediate between the well-known "northern" race, *D. p. medianus* (Swainson) and some other form, perhaps *D. p. leucurus* (Hartlaub), although their size and the noticeable white spotting of the wings proclaim them closer to *medianus* than to any other form at present recognized.

46. *Dryobates scalaris symplectus* Oberholser. TEXAS WOODPECKER.

Recorded by us only in the Black Mesa country of Cimarron County, where we found it to be fairly common among the cottonwoods and willows along the streams, noted it infrequently among the conifers of the mesas, and observed it climbing about certain woody cactus clumps in the open prairie country.

Several specimens were taken during both visits. In all these the plumage is so fresh and clean that the general appearance is markedly different from that of spring specimens in which the feathers are frayed and soiled.

The Texas Woodpecker is one of the few birds that is to be seen regularly in the trees that sparsely line the streets of Kenton.

47. *Tyrannus verticalis* Say. ARKANSAS KINGBIRD.

We did not record this species anywhere in Oklahoma east of Cimarron County, though Mrs. Nice (1931, 117) has found it to be a "summer resident throughout the western half of the state."

We recorded it daily about Kenton during our 1932 visit, as late as October 1, when an adult female and young male were collected. In 1933 it was present throughout our stay; on September 29 we recorded several and took a female that had not yet completed the postjuvinal moult.

Mr. Tate considers the species a regular summer resident in the Kenton region; but it is our opinion that we witnessed, on September 25, 1932, and on September 25 and 26, 1933, considerable influxes

of transients from the north. On the first-named of these dates we must have seen well over one hundred birds in a relatively compact flock.

48. *Muscivora forficata* (Gmelin). SCISSOR-TAILED FLYCATCHER.

To our great surprise we did not record this species during either 1932 or 1933 in the Black Mesa region, in spite of the fact that we kept a constant lookout for it. Throughout most of the eastern and central parts of the State traversed by us we saw it commonly, noting it as far west as Dewey County in mid-September, 1932, but not about Arnett, Ellis County, on that date; and observing, at the time of our return east in October, that we encountered it first in the vicinity of Gate, Beaver County, and Rosston, Harper County, and that on October 6 it was common about Arnett. These data appear to indicate a distinct migratory movement of some sort in at least the western half of the State; and such a migratory movement may account for the absence of the species from the Black Mesa section during the time of our visits there.

49. *Sayornis phoebe* (Latham). EASTERN PHOEBE.

Since Mrs. Nice (1931, 119-120) does not mention any Panhandle records for this species it was with considerable interest that we noted it twice in the vicinity of Kenton during our 1932 visit: on September 28, a female taken from the cottonwoods along the Tequesquite; and on October 4, one seen among the high weeds along the Cimarron River, about three miles northeast of Kenton.

50. *Sayornis saya saya* (Bonaparte). SAY'S PHOEBE.

Mrs. Nice (1931, 120) calls this species an "uncommon summer resident in Cimarron County." We recorded it so frequently in the Black Mesa country and took so many specimens in both 1932 and 1933 that we are inclined to consider it decidedly common as a transient in the fall. During 1932 we recorded it almost daily, taking a female in the midst of the postjuvinal moult on September 24, and noting four individuals as late as October 1. In 1933 it was present during our entire sojourn at Kenton, a few being listed on September 29. This species and the Arkansas Kingbird were frequently seen in the same flocks.

51. **Empidonax trailli brewsteri** Oberholser. LITTLE FLYCATCHER.¹⁴

A male specimen of *Empidonax trailli* in what appears to be almost perfect *juvenal* plumage was taken among scrub-oak brush on a steep mesa-side about six miles south of Kenton, Cimarron County, on September 25, 1933. This individual we somewhat doubtfully refer to the present subspecies, which Mrs. Nice (1931, 121) thinks may breed rarely in "central or western Oklahoma." So far as we know the specimen taken is the only individual of the present species seen by us during our two visits to the Black Mesa country.

52. **Empidonax minimus** (Baird and Baird). LEAST FLYCATCHER.

Mrs. Nice (1931, 121) calls this species a "rare transient in eastern and central Oklahoma." It is apparently a regular transient, and perhaps even a rare summer resident, in the far western Panhandle also, for we collected three specimens in the vicinity of Kenton, Cimarron County, two *juvenal* individuals (one a male; sex of the other undetermined) on September 26, 1932, and an adult female on September 26, 1933; and recorded what we thought to be Least Flycatchers upon several occasions in the thicker stands of cottonwoods near the Cimarron and Tequesquite.

Considerable doubt exists in our mind as to which member of the genus *Empidonax* is the common transient form in the Black Mesa country, and as to which members of the genus nest. These facts are worth noting, at any rate: all our Least Flycatcher specimens, without exception, were taken from the cottonwood growth along the margins of the streams; all our Hammond's Flycatcher specimens were taken among the scrub-oak brush of steep mesa-sides. Of all the specimens of the genus taken, that of *E. trailli* is decidedly the most *juvenal* in general appearance, though two of *E. minimus* apparently are not in an advanced stage of the postjuvenal moult. Whether it

¹⁴It is exceedingly regrettable, in the author's opinion, that such a characterless, if not downright misleading, common name as "Little Flycatcher" must be given this bird. For those who are familiar with the sticky fly-paper entanglements of ornithological nomenclature one common name is as good as another; but for bird students in general there should be common names that describe birds in some sensible way rather than names that record for all time mere nomenclatural confusions and mistakes.

is customary for individuals of this genus to migrate while in juvenal feather is a question we cannot at present answer.

53. **Empidonax hammondi** (Xantus). HAMMOND'S FLYCATCHER.

Recorded only in the vicinity of Kenton, Cimarron County, once with certainty in 1932 (a female taken September 26); and upon two occasions in 1933: on September 21, when two specimens were taken (one a male; sex of the other not determined); and on September 25, when a male and female were taken. All these birds were collected in oak-lined, rocky gullies along steep mesa-sides about six miles south of Kenton, not far from the Regnier ranch-house. On the last named of the above dates several small flycatchers were seen in these oak-lined gullies, and one of these proved upon collection to be *Empidonax trailli*; but it is our present belief that none of them was *E. minimus*, which apparently is found in the Kenton region only in the cotton-wood growth along the streams. Identification of living birds we found to be practically impossible, however, for none of them gave forth any distinct call-note.

All of our specimens of *E. hammondi* are strongly yellowish beneath, and are probably of the so-called "yellow-bellied phase" mentioned by Ridgway.¹⁵ All bear strong superficial resemblance to *E. minimus*, but they have much smaller, narrower and darker bills; the tenth primary is longer than the fifth; and the contrast as observable from above between the gray of the head and the green of the back is stronger than in *minimus*. In identifying our specimens we borrowed from the U. S. National Museum four California specimens. In two of these (male, female) the bills are noticeably larger than in any of our birds; but the bills of the other two California birds are as small as in our Oklahoma Panhandle individuals.¹⁶ Ridgway tells us that the middle toe of *hammondi* is "much longer" than that of *minimus*. This statement is not borne out in the specimens at hand.

Our Kenton specimens apparently furnish the first records of this interesting little flycatcher for the State of Oklahoma. Hammond's Flycatcher is probably a regular and common transient in the Black Mesa country.

¹⁵RIDGWAY, ROBERT. Birds of North and Middle America.—*Bulletin United States National Museum*, No. 50. Part IV, 1907, 565.

¹⁶Possibly an age difference.

54. *Myiochanes richardsoni richardsoni* (Swainson). WESTERN WOOD PEWEE.

Recorded on three occasions, and only in the vicinity of Kenton, Cimarron County: September 25, 1932, an immature female taken at the mouth of the Tequesquite; September 25, 1933, two immature birds taken; and September 26, 1933, two birds seen, one apparently an adult, the other an immature. None of these birds was heard to utter any sort of call-note.

55. *Nuttallornis mesoleucus* (Lichtenstein). OLIVE-SIDED FLYCATCHER.

A female specimen of this species, taken by us on September 25, 1932, at the mouth of the Tequesquite not far from Kenton, Cimarron County, is apparently the first to be taken in the State. Mrs. Nice (1931, 122) calls the Olive-sided Flycatcher a "rare transient" in Oklahoma.

56. *Otocoris alpestris* (Linnaeus). HORNED LARK.

We noted this species in nearly all sections of the State traversed by us, finding it by far the most abundant bird of the treeless Panhandle plain and of the prairie-like sections between Alva, Woods County, and Pawhuska, Osage County. In the immediate vicinity of Kenton, Cimarron County, it was strikingly absent, though eight miles east of Kenton (where the mesa country abruptly ends and the plains begin) it was common, small flocks being encountered here and there along the highway or in the desert-like open stretches.

We procured specimens of two subspecies. A male taken from a large flock encountered near Boise City, Cimarron County, on October 5, 1932, and remains of three individuals picked up on the same date in the vicinity of Guymon, Texas County, all apparently are referable to *O. a. leucolaema* (Coues); whereas a single male, taken from a loose flock near Pawhuska, Osage County, on October 8, 1932, is a Prairie Horned Lark, *O. a. praticola* Henshaw.

57. *Hirundo erythrogaster* Boddaert. BARN SWALLOW.

Noted only in the Panhandle. An adult and two young birds were seen at Guymon, Texas County, on September 20, 1932, and during the same year four adults were seen at Kenton, Cimarron County, on

September 30. In 1933, three were seen near Kenton on September 21, and two more were noted on September 24.

58. *Cyanocitta cristata* (Linnaeus). BLUE JAY.

We noted this species many times along the highway between the northeastern corner of the State (Ottawa County) and Oklahoma City, Oklahoma County, and also, though somewhat less commonly, between Oklahoma City and Arnett, Ellis County, on September 18 and 19, 1932. We did not observe it at all in crossing the Panhandle plain. At Kenton, Cimarron County, we found it rare and irregular. On September 25 we saw a flock of twelve apparently transient individuals. On September 29 we saw another flock and took one bird, a female. On September 30, one bird, and on October 1, three birds were seen.

In 1933 we saw it again in eastern and central Oklahoma, but looked in vain for it about Kenton until September 28, when, at night-fall, a flock of eight was seen descending from high in the sky to the walnut trees along the Tequesquite where they promptly sought a roosting-place for the night. These birds were probably transients, perhaps actually on their way southward. By getting out early on the morning of the 29th we succeeded in shooting one individual, a male, before the flock departed.

In Mrs. Nice's opinion (1931, 126) the Northern Blue Jay, *C. c. cristata*, is "resident throughout the state." Before attempting identification of our two Kenton birds I borrowed from the University of Oklahoma, the Colorado Museum of Natural History, the Carnegie Museum, and the University of Kansas a total of sixty-one specimens of Blue Jay; and collected three specimens in fresh fall plumage near Ithaca, New York, so as to have an abundance of strictly comparable material.

Our two Kenton birds are plainly different from all New York specimens at hand; they tend to be smaller, and they are decidedly less *blue* and more grayish throughout the upper parts, especially on the crest. They also are plainly different from a series of seven specimens from Whitfield, Florida, being larger, less purplish blue above, and relatively smaller-billed. They are far closer to specimens from Kansas and Colorado, all of which appear to be paler throughout than more eastern birds; and these western birds are uniform enough,

as a series, to suggest the likelihood of their representing a race whose range we may postulate for the western, or perhaps the southwestern margin of the range-at-large of *Cyanocitta cristata*.

The nomenclature pertaining to the races of *Cyanocitta cristata* is confusing. According to the present A. O. U. "Check-List," our New York birds should be *C. c. cristata*, and the Whitfield, Florida, birds *C. c. florincola* Coues. According to Oberholser,¹⁷ on the other hand, the New York birds should be *C. c. bromia* Oberholser, and the Whitfield, Florida, birds *C. c. cristata*. Whether birds from the vicinity of Wayne County, Ohio, the type-locality of *bromia*, are different from those of Putnam County, Florida (the type-locality of *florincola*); and from those of "southeastern" South Carolina (the type-locality of *cristata*) we cannot from personal investigation say; but we should expect the birds from northern Ohio to be the same as those from New York; and we should rather expect South Carolina *breeding* birds to be different from Ohio and New York birds. Be these matters as they may, it appears from the considerable series of specimens at hand that the pale, blue-gray birds from extreme northwestern Oklahoma, western Kansas, and eastern Colorado represent a westerly ranging race of *Cyanocitta cristata* that is different from any known eastern race, and that is at present without a name.

Unfortunately we have been able to procure for comparison only a very few specimens from Oklahoma. Our Kenton birds are grayer than four individuals collected in sections of Oklahoma east of the Panhandle (University of Oklahoma Museum), suggesting that some eastern race may possibly occur throughout central and eastern parts of the State; and that the range of *Cyanocitta cristata* probably is definitely interrupted by the Panhandle plain.

That the closest affinities of our Kenton birds are with a northerly¹⁸ rather than a southerly race is obvious from the general effect and appearance of the color-tones of the upper parts, and the proportions of the bill. That they are not greatly different in size from specimens taken in New York is shown by the following measurements.

¹⁷ OBERHOLSER, HARRY C. The Geographic Races of *Cyanocitta cristata*.—*Auk*, XXXVIII, 1921, 83-89.

¹⁸ Oberholser, in his paper on the races of *Cyanocitta cristata*, says: "Examples from central northern and northwestern Texas, as well as from central Oklahoma, are, however, decidedly intermediate, but apparently belong to this northern subspecies."

MEASUREMENTS (IN MILLIMETERS) OF *CYANOCITTA CRISTATA*
IN FRESH FALL PLUMAGE.

Locality	GMS No.	Sex	Bill ¹⁹	Wing	Tail	Tarsus
Kenton, Okla.	5252	♂	18	138	134	35
Ithaca, N. Y.	5256	♂	20.5	140	133	37
Ithaca, N. Y.	5260	♂	20.5	141	135	38
Kenton, Okla.	4656	♀	18.5	131	124	34
Ithaca, N. Y.	5257	♀	19	130	124	34

59. *Apelocoma californica woodhousei* (Baird). WOODHOUSE'S JAY.

A common bird in the Black Mesa country of Cimarron County, where we observed it daily among the conifers and scrub-oak of the mesa-slopes, and took several specimens, all in perfect feather. Not noted elsewhere in the State.

60. *Pica pica hudsonica* (Sabine). AMERICAN MAGPIE.

Noted only in the Black Mesa country of Cimarron County. It is our opinion that this species is rapidly becoming commoner in the vicinity of Kenton. In 1932 we recorded it on several dates, notably at the A. L. Brookhart ranch, 15 miles northeast of Kenton, and along the Tequesquite, where we found remains of nests in some high walnut trees. In 1933 we were surprised at finding it in nearly all the clumps of cottonwood near Kenton, family flocks trooping here and there on the mesa-sides, flying down to the river for drinking and bathing, and assembling in considerable companies at eventide at favorite roosting-places. We found twenty or more bulky nests that must have been built during the spring of 1933.

We took four specimens in all, according to Mrs. Nice (1931, 127) the first to be taken in Oklahoma: a male, October 1, 1932; a female, October 2, 1932; and a male and immature female (postjuvenile moult about half completed) on September 27, 1933.

The behavior of magpies after dark interested us greatly. Once the birds had gone to roost they were loath to leave the trees, and upon being frightened flopped about clumsily, making their way to trees nearby, where they became quiet as soon as possible. If disturbed in the early evening at a favorite roosting-place they frequently flew to the mesas, then trailed back, one by one, in a series of swift, head-long plunges, just at nightfall.

¹⁹Measured from tip of upper mandible to anterior margin of nostril.

61. **Corvus cryptoleucus** Couch. WHITE-NECKED RAVEN.

On October 7, 1932, about fifteen miles east of Arnett, Ellis County, we saw a large flock of White-necked Ravens circling high in air. We did not note the species elsewhere in the State.

62. **Corvus brachyrhynchos** Brehm. CROW.

We noted crows practically everywhere along our route through eastern and central Oklahoma. On the Panhandle plain and in the Black Mesa country we never once saw them, though we looked for them constantly about Kenton, hoping that we might procure specimens of the western subspecies, *C. b. hesperis* Ridgway.

The head, wing, and foot of a male specimen taken near Laverne, Harper County, on October 5, 1932, were preserved. The appearance and measurements of these indicate the eastern race, *C. b. brachyrhynchos*: exposed culmen, 44 mm.; wing, 322; tarsus, 60.

63. **Cyanocephalus cyanocephalus** (Wied). PINYON JAY.

Noted only in the Black Mesa country of Cimarron County, where we found it to be fairly common on the mesas. We took several specimens, one a male in juvenal plumage (September 22, 1932).

For some reason, perhaps because of scarcity of pine cones, the Pinyon Jays fed much of the time during our 1933 visit in the lowlands, foraging among the weed-growth of the pastures and eating especially the hard seeds of the plant called "devil's horns." The crop and stomach of a female bird taken from a large flock that was feeding along the Tequesquite on the morning of September 29, 1933, were packed with these dry, rough seeds.

64. **Penthestes gambeli** (Ridgway). MOUNTAIN CHICKADEE.

We recorded this species, which is not listed by Mrs. Nice (1931), on three occasions, in the far western Panhandle, and took two specimens, apparently the first for the State: a male, September 25, 1933, from large pine trees²⁰ on a mesa-top six miles south of Kenton; and a male, September 29, 1933, from hackberry trees along the headwaters of the Tequesquite. We saw and heard a chickadee (probably of the present species, though the white superciliary line was not noted) on September 29, 1932, among cedars on a mesa-top about three miles east of Kenton.

²⁰Mountain Pines, so-called—a rare tree in the Kenton region.

Our specimens presumably are of the well-known, widely ranging race, *P. g. gambeli*, that is said to occur throughout eastern portions of the Rocky Mountain region.

65. *Baeolophus inornatus griseus* (Ridgway). GRAY TITMOUSE.

Mrs. Nice (1931, 132) calls this bird an "uncommon winter visitant in Cimarron County." We noted it so many times in the Black Mesa country (taking a total of four specimens) that we are inclined to consider it fairly common, and furthermore to believe that it may nest in the region. True, we did not observe family flocks going about together on any occasion; but we saw it repeatedly before any general influx of other winter visitant species had taken place. Call-notes of the species we thought to be strongly chickadee-like.

66. *Psaltriparus minimus plumbeus* (Baird). LEAD-COLORED BUSH-TIT.

Noted only on the mesas about Kenton, Cimarron County, where about forty individuals were seen (and two collected) on September 23, 1932; several family groups were noted on September 20, 1933; and a family flock of eight was watched for some time on September 27, 1933. Irides in young specimens were grayish white; in mature specimens very pale straw-color, almost silvery in appearance.

67. *Sitta carolinensis* Latham. WHITE-BREADED NUTHATCH.

Mrs. Nice (1931, 133) considers the well-known eastern race of this species, *S. c. carolinensis*, "resident" in northeastern Oklahoma, so that it is likely the White-breasted Nuthatches noted by us in wooded sections of Craig and Rogers Counties were of this race.

A female specimen taken by us along the Tequesquite, near Kenton, Cimarron County, on September 22, 1933, is obviously not of the eastern race, however, but is apparently a Rocky Mountain Nuthatch, *S. c. nelsoni* Mearns. According to Mrs. Nice's list this is the first specimen of this subspecies for the State, and it is the only nuthatch of any species observed by us in the far western Panhandle.

68. *Troglodytes domesticus* (Wilson). HOUSE WREN.

We recorded this species only in the vicinity of Kenton, Cimarron County, where we took four specimens, three males and one female.

According to personal word from Mrs. Nice these are the only Oklahoma specimens of this wren at present extant: 1932, male, September 23; 1933: male, September 21; male, September 22; and female, September 26. We recorded the species as late as October 1 in 1932.

These birds appear to us to be closer to *T. d. parkmani* Audubon than to the eastern race, but they do not agree perfectly with Carnegie Museum specimens of *parkmani* and they apparently are not dark enough for Oberholser's recently described *baldwini*, which is said to range as far west as "western Michigan, central northern Indiana, and western Ohio" in summer, and to "Illinois and Arkansas" in migration.²¹

69. **Thryomanes bewicki** (Audubon). BEWICK'S WREN.

Noted only in the far western Panhandle where, in the vicinity of Kenton, Cimarron County, we found it to be a fairly common species and took a series of ten specimens, one an immature individual in the midst of the postjuvencal moult (September 25, 1933).

We took two specimens in 1932. These were provisionally identified as *T. b. cryptus* Oberholser, though it was noted that the general coloration of the upper parts was distinctly different from that of *cryptus*. After collecting additional specimens in 1933 we borrowed comparative material (146 specimens in all), decided that the Kenton birds were distinct from *T. b. eremophilus* Oberholser as well as from *cryptus* and other recognized forms, and gave them the name *Thryomanes bewicki niceae* in honor of Mrs. Nice (*Auk*, LI, 1934, 217). In our description of this new form we called attention to the fact that the Oklahoma range of *niceae* apparently is restricted to the far western Panhandle; that no form of Bewick's Wren is known to inhabit the vast Panhandle plain; and that the subspecies found throughout central and southern parts of the State is probably *T. b. cryptus*, unless *T. b. bewicki* is found "on the eastern border" (see Mrs. Nice's paper, 1931, 135).

70. **Cistothorus stellaris** (Naumann). SHORT-BILLED MARSH WREN.

Recorded once, on September 24, 1932, a mile west of Kenton, Cimarron County, where a female was taken from the grasslands between two mesas.

²¹ OBERHOLSER, HARRY C. A Revision of the North American House Wrens. *Ohio Journal of Science*, XXXIV, 1934, 86.

71. **Catherpes mexicanus conspersus** Ridgway. CANYON WREN.

Noted only in the Black Mesa country of the far western Panhandle, where we found it here and there among the mesas about Kenton and took several specimens, most of them being in the moult.

72. **Salpinctes obsoletus obsoletus** (Say). ROCK WREN.

Noted only in the far western Panhandle where we found it common and took several specimens, some of them in the moult. It is much more abundant in the vicinity of Kenton than the Canyon Wren, and is to be encountered frequently near the highways that skirt the mesas. It is a friendly, vivacious bird, given to mounting prominent boulders, where it bobs energetically while uttering its alarm cry.

73. **Mimus polyglottos** (Linnaeus). MOCKINGBIRD.

Mockingbirds seen by us in eastern and central parts of the State were probably of the eastern race, *M. p. polyglottos*. A single bird seen near Gate, Beaver County, on September 20, 1932; one seen at Kenton on September 21, 1932; and single birds noted along the Tequesquite on September 22, 24, and 26, 1933, may have been of the western race, *M. p. leucopterus* Vigors, but no specimen was taken.

74. **Dumetella carolinensis** (Linnaeus). CATBIRD.

Noted only at Kenton, Cimarron County, where a female specimen was taken on September 21, 1933, at the mouth of the Tequesquite.

75. **Toxostoma rufum** (Linnaeus). BROWN THRASHER.

Noted only in the vicinity of Kenton, Cimarron County, where a single bird was seen on September 23, 1932, and two specimens were taken during 1933: a male on September 26 (not preserved); and a somewhat youngish female on September 29.

76. **Toxostoma curvirostre** (Swainson). CURVE-BILLED THRASHER.

Mrs. Nice (1931) does not include this species in her list. We did not note it in 1932, but recorded it several times in the vicinity of Kenton during our 1933 visit, and finally succeeded in securing two specimens: an adult in the midst of the postnuptial moult, September 22 (embalmed specimen); and a male, apparently an adult, in fresh

plumage, September 29. This latter individual is noticeably grayer than any specimen of *T. c. curvirostre* in the Carnegie Museum Collection, but is apparently closer to this race than to any other, and the series at hand are not in strictly comparable plumage.

77. **Oreoscoptes montanus** (Townsend). SAGE THRASHER.

Mrs. Nice (1931, 141) calls this species a "rare summer resident" in western Cimarron County. We recorded it so frequently throughout both our visits and took so many specimens that we regard it as a fairly abundant fall transient in the Kenton region, and are inclined to think it must be fairly common in summer at the present time. We saw it nowhere to the eastward of the Black Mesa country.

78. **Turdus migratorius** Linnaeus. AMERICAN ROBIN.

Robins seen by us in eastern and central Oklahoma were probably of the eastern race, *T. m. migratorius*. As to birds seen in the Kenton region (1932: two seen, September 21; three seen, October 3—1933: one seen, September 24; one seen, September 29) we cannot say. A fine male specimen, taken September 29, 1933, along the Tequesquite, has very little white on the outermost rectrices and is apparently a Western Robin, *T. m. propinquus* Ridgway.

79. **Hylocichla guttata** (Pallas). HERMIT THRUSH.

Identified with certainty only in the vicinity of Kenton, Cimarron County, where it was recorded throughout the period of both our visits and a total of eight specimens was taken, five in 1932 and three in 1933. The 1932 specimens were provisionally identified as *Hylocichla guttata sequoiensis* (Belding), though it was observed that the series was not uniform, and we were in considerable doubt as to one large-sized bird. Some of our difficulty centered in the suspicion that there was some mistake in the sexing of our specimens.

After our 1933 expedition we submitted all our specimens save one to Dr. Oberholser, who pronounced four of them *H. g. oromela* Oberholser; one of them *H. g. auduboni* (Baird); and two of them *H. g. polionota* Grinnell. Since all specimens were taken during the period of the fall migration (from September 22 to September 30), we attach no special significance to the date upon which any was taken. The *auduboni* ("not typical" according to Oberholser) was collected

September 23, 1933. The *polionota* (both females) were taken September 27, 1932, and September 26, 1933. The *oromela* (four females) were all taken in 1932.

One additional specimen (a poor skin, questionably a female), taken September 29, 1933, was submitted to Mr. Riley, who expressed the opinion that it should be *H. g. dwighti* Bishop. The bird was a young individual of the year, as shown by the spots on the wing-coverts. Following Mr. Riley's suggestion, we sent this specimen on to Dr. Bishop who, after comparing it with the extensive series of *guttata* in the Los Angeles Museum, called it "a typical specimen of *H. g. dwighti*." In Dr. Bishop's letter (dated March 16, 1934) are the following pertinent sentences: "After seeing your bird I refer the Arkansas bird also to *dwighti* without hesitation, and suspect that many of the eastern records of *guttata* will prove to be of this form. Nor would this be strange, as the breeding bird of northern Idaho would apparently be more likely to wander east than would that of Alaska."

Obviously subspecific identification of transient or wintering Hermit Thrushes of the Kenton region is impossible without the collecting of specimens. Since we have had no ready access to extensive series of *guttata* we are glad to accept the findings of the three above-named gentlemen upon the eight specimens collected. It is interesting to observe that not one of the subspecies taken by us is mentioned by Mrs. Nice in her admirable book. Under the circumstances it seems likely that certain specimens listed by her under *H. g. sequoiensis* (1931, 143) are of the more recently named subspecies *dwighti*, *polionota*, and *oromela*.

80. ***Hylocichla ustulata*** (Nuttall). OLIVE-BACKED THRUSH.

We recorded *Hylocichla ustulata* only in the Kenton region, where it is apparently a rare transient. A specimen shot on September 21, 1932, and badly mutilated, unfortunately was lost before any subspecific identification was made. A female specimen taken at the mouth of the Tequesquite on September 29, 1933, is of the eastern race, *H. u. swainsoni* (Tschudi). Mrs. Nice (1931, 143) calls this subspecies a "regular spring transient throughout the state," but does not mention its occurrence in the fall. It seems to us likely that the western subspecies, *H. u. ustulata*, may also occur as a transient in the Kenton region.

81. ***Sialia sialis*** (Linnaeus). EASTERN BLUEBIRD.

Seen at several points in the northeastern corner of the State during both 1932 and 1933, the most westerly locality at which it was definitely recorded being between Seiling and Chester, in Major County: a good sized flock, October 7, 1932. Mr. Tate has recorded the species about Kenton in summer, but we did not see it there (see Mrs. Nice's list, 1931, 144).

82. ***Sialia currucoides*** (Bechstein). MOUNTAIN BLUEBIRD.

Noted only in the vicinity of Kenton, Cimarron County. In 1932 it was recorded first on September 27, on which date a family group was seen. On September 28 a male was taken. On October 1 three were seen and a male was taken. On October 3 (sudden colder weather) there was a noticeable migratory wave, large flocks being seen everywhere about the mesas, and three adults and two immature specimens being taken. On October 4 many were seen eating cedar berries. In 1933 it was recorded but once: September 29, a single bird flying high over a mesa just east of Kenton.

83. ***Myadestes townsendi*** (Audubon). TOWNSEND'S SOLITAIRE.

Recorded only in the vicinity of Kenton, Cimarron County, and only during 1933: September 20, two seen, and a female specimen taken along the Tequesquite; September 22, a female taken; September 29, two seen flying along the rim of a mesa on the John Regnier ranch, six miles south of Kenton.

84. ***Polioptila caerulea*** (Linnaeus). BLUE-GRAY GNATCATCHER.

Noted only near Kenton, Cimarron County, and only during 1932, a single bird on each of the following dates: September 23, 24, and 30. The bird seen on the 30th (female) was collected.

This specimen apparently is close to the western race, *P. c. amoenissima* Grinnell, for it is paler above than female *caerulea* from the eastern United States, and the black at the base of the outermost rectrices shows plainly beyond the tips of the under tail-coverts. Measurements of the specimen are: exposed culmen, 10.5 mm.; wing, 51.5; tail, 52; tarsus, 17.5.

85. *Corthylio calendula calendula* (Linnaeus). EASTERN RUBY-CROWNED KINGLET.

Noted throughout both visits in the Black Mesa country, notably on September 23 and 27, 1933, when specimens (one adult, one immature) were taken. These are clearly referable to the eastern race.

86. *Anthus spraguei* (Audubon). SPRAGUE'S PIPIT.

One bird noted, in open prairie nine miles east of Kenton, Cimarron County, on October 2, 1932. This date probably marks the beginning of the autumnal migration of the species through the Panhandle.

87. *Lanius ludovicianus* Linnaeus. LOGGERHEAD SHRIKE.

Shrikes of this species seen here and there all along the highway between the northeastern corner of the State and Oklahoma City presumably were Migrant Shrikes, *L. l. migrans* Palmer. Whether birds seen between Oklahoma City and Arnett, Ellis County, were of the same race we cannot at present say. Specimens taken in the vicinity of Kenton, Cimarron County, where the species was abundant, are all referable to *L. l. excubitorides* Swainson, the White-rumped Shrike. Most specimens taken were in the moult. Very few shrikes were seen along the trans-Panhandle highway.

88. *Vireo gilvus* (Vieillot). WARBLING VIREO.

During the course of our field-work in Oklahoma we noted only one vireo, a Warbling Vireo (female) taken near Kenton, Cimarron County, on September 22, 1933. Since this specimen is smaller and darker than average eastern *gilvus*, and since there is a noticeable contrast between the shade of the pileum and that of the back, it obviously represents the western race, *V. g. swainsoni* Baird.

89. *Vermivora celata* (Say). ORANGE-CROWNED WARBLER.

We did not record this species anywhere east of Ellis County, but this was almost certainly because we did not pause anywhere along the way. In Ellis, Harper, and eastern Beaver Counties we saw it repeatedly; we did not note it in crossing the Panhandle plain; but in northwestern Cimarron County we noted it every day, and considered it one of the commonest warblers of the region.

We collected ten specimens in all. Of these five are clearly referable to the eastern race, *V. c. celata*: female, Laverne, Harper County,

September 20, 1932; female, Kenton, Cimarron County, September 24, 1932; male, Kenton, October 3, 1932; female, Kenton, September 25, 1933; and female (?), embalmed, Kenton, September 28, 1933.

Four are too strongly yellow below for *celata* and probably should be called *V. c. orestera* Oberholser, a form not listed by Mrs. Nice (1931) and not recognized in the present A. O. U. "Check-List." All these *orestera* were taken about Kenton: male, September 23, 1932; male, September 30, 1932; male, September 21, 1933; and male (embalmed), September 23, 1933.

One, taken among tall mountain pines about six miles south of Kenton, on September 25, 1933, is too yellow, throughout the entire ventral region, even for *orestera*, the malar region, lores, eye-ring, and face in general being strongly yellowish. This bird (sex ?) we must call *V. c. lutescens* (Ridgway), a western race that is probably not a regular transient in the Black Mesa country.

90. **Vermivora ruficapilla** (Wilson). NASHVILLE WARBLER.

A yellow-breasted warbler noted along the Cimarron River near Kenton on September 24, 1932, was probably of this species, but it was not collected. The western subspecies, *V. r. ridgwayi* van Rossem, may migrate through the Black Mesa country regularly, in view of the possibility that eastern *ruficapilla* is restricted to "eastern and central Oklahoma" (Nice, 1931, 156).

91. **Dendroica caerulescens** (Gmelin). BLACK-THROATED BLUE WARBLER.

We took a female specimen (Kenton, October 1, 1932) that is apparently of the well-known northern race, *D. c. caerulescens*. Mrs. Nice (1931, 158), who characterizes this species as a "rare transient in eastern Oklahoma," informs us that this is the first specimen of Black-throated Blue Warbler to be taken in the State since the time of Woodhouse.

92. **Dendroica auduboni** (Townsend). AUDUBON'S WARBLER.

Noted by us only in the Kenton region of Cimarron County, but recorded there daily during the course of our two visits. On September 28 in 1932 and on September 30 in 1933, the species became suddenly abundant as if a migratory wave were taking place. Several

specimens were collected, but as to the subspecies represented we have not been able to decide.

93. *Dendroica townsendi* (Townsend). TOWNSEND'S WARBLER.

This pretty warbler, which is not listed by Mrs. Nice (1931), we recorded several times in the Black Mesa country, collecting three specimens in the vicinity of Kenton: a handsome male, along the Tequesquite, September 21, 1932; a female, from conifers along the base of a mesa, September 25, 1933; and another female, on the John Regnier ranch six miles south of Kenton, on September 27, 1933. Our specimens are apparently the first to be taken in the State.

94. *Dendroica striata* (Forster). BLACK-POLL WARBLER.

A dull-colored warbler noted on October 3, 1932, along the Tequesquite, proved upon being collected to be an immature male of the present species. The specimen was embalmed.

95. *Oporornis tolmiei* (Townsend). MACGILLIVRAY'S WARBLER.

Recorded by us only in the Kenton region, Cimarron County, where we took three apparently immature specimens (the first of this species actually taken in the State) from weed-clumps along the Tequesquite and Cimarron: September 20, 1932; September 23, 1933; and September 24, 1933. All these specimens were badly mutilated and were preserved by embalming.

96. *Geothlypis trichas* (Linnaeus). YELLOW-THROAT.

We noted this species only in the far western Panhandle, where it was recorded on three dates in 1932: September 22, an immature female taken along the Tequesquite; September 23, several seen in high weeds along the Cimarron and Tequesquite; and September 26, three seen along the Tequesquite. In 1933 it was noted once, on September 21, when a single bird was seen at the mouth of the Tequesquite.

The specimen taken September 22, 1932, is referable to the western subspecies, *G. t. occidentalis* Brewster, and is apparently the first of this form to be taken in the State.

97. *Wilsonia pusilla* (Wilson). WILSON'S WARBLER.

We recorded this species only in the far western Panhandle, where we considered it the commonest of the smaller woodland birds. We

noted it daily throughout both our visits in the Kenton region, took several specimens, and doubtless would have listed it at various localities east of the Panhandle plain had we had more time for careful work along the way.

Both the well-known eastern and a western subspecies are to be found about Kenton, apparently with some regularity, during the period of the fall migration, *W. p. pusilla* being decidedly the rarer of the two according to our limited observation. The abundant form is the Northern Pileolated Warbler, *W. p. pileolata* (Pallas).

We recorded *W. p. pusilla* with certainty only once, on September 23, 1932, when a male specimen was taken. All other specimens prove to be the somewhat larger *pileolata*. It is our present feeling that this latter subspecies possibly is recognizable as *pileolata* in the field, for its customary call-note struck us as being different from that of the Wilson's Warbler of the eastern United States.

Our specimens of *W. p. pileolata* are apparently the first to be taken in Oklahoma, though Mrs. Nice (1931, 164) has predicted that this subspecies would be found in Cimarron County as a transient.

98. **Setophaga ruticilla** (Linnaeus). AMERICAN REDSTART.

Noted once—an immature male bird, on September 21, 1932, near Kenton, Cimarron County.

99. **Passer domesticus** (Linnaeus). ENGLISH SPARROW.

Observed here and there about the towns even in the Panhandle plain region; fairly common at Kenton, Cimarron County.

100. **Sturnella magna** (Linnaeus). EASTERN MEADOWLARK.

We took no specimen of this species in Oklahoma, but Meadowlarks observed by us in the northeastern corner of the State were certainly of the present species, for we noted their songs carefully upon several occasions.

101. **Sturnella neglecta** Audubon. WESTERN MEADOWLARK.

In making our way westward across the State we listened carefully to Meadowlark songs. The song of the Western species we heard first near Shattuck, Ellis County. From this general region westward we noted the species commonly, finding it fairly numerous throughout

the Panhandle plain and abundant in certain open valleys in the vicinity of Kenton, Cimarron County. Large flocks, apparently of migrating birds, were observed on September 22, September 29, and October 1, 1932, and on September 28, 1933. Several specimens were taken.

102. **Xanthocephalus xanthocephalus** (Bonaparte). YELLOW-HEADED BLACKBIRD.

Noted at two localities, on September 20, 1932: a single bird at Laverne, Harper County; and a small flock near Guymon, Texas County.

103. **Agelaius phoeniceus** (Linnaeus). RED-WING.

Noted here and there in all sections of the State traversed by us, even in the Panhandle plain. Recorded on only three dates in the vicinity of Kenton, and only during 1932: September 20, a few small flocks flying eastward along the Cimarron; October 3, two female birds taken; and October 4, a single female bird seen. The two female specimens²² taken are apparently Thick-billed Red-wings, *A. p. fortis* Ridgway, a race said by Mrs. Nice (1931, 168) to be a summer resident in the Panhandle.

104. **Euphagus cyanocephalus** (Wagler). BREWER'S BLACKBIRD.

Blackbirds of the genus *Euphagus* were noted by us only in the Kenton region, and only during our 1933 visit. They were identified as the present species, but there is a chance that some or all of the birds were Rusty Blackbirds, *Euphagus carolinus* (Müller), since, according to Mrs. Nice (1931, 170) both these species are to be expected in any part of the State at this season of the year. A single bird was noted September 22; and a flock of five was seen along the Cimarron, northeast of Kenton, on September 28. It is regrettable that no specimen was taken.

105. **Quiscalus quiscula aeneus** Ridgway. BRONZED GRACKLE.

Noted at several points in the State, but not in the Panhandle plain section. On September 26, 1932, several small flocks were seen

²²Identification of skin checked by Mr. Todd; of embalmed specimen by Dr. Oberholser. Measurements of the latter specimen are: wing, 110 mm.; tail, 78; exposed culmen, 19; depth of bill, 10.

flying eastward along the Cimarron River not far from Kenton. On September 29 large flocks were seen at the A. L. Brookhart ranch fifteen miles northeast of Kenton. On October 5, 1932, a single bird was seen near Laverne, Harper County.

106. **Molothrus ater** (Boddaert). COWBIRD.

Not seen in the far western Panhandle. A few flocks were noted here and there in sections of the State east of the Panhandle, and a small flock was noted about some cattle near Gate, Beaver County, on October 5, 1932. All these birds presumably, though not certainly, were of the eastern subspecies, *M. a. ater*.

107. **Piranga ludoviciana** (Wilson). WESTERN TANAGER.

In view of the fact that we recorded this handsome species several times in the Black Mesa country it is indeed astonishing that it has not heretofore been noted in the State. On September 25, 1932, we saw several Western Tanagers in the cottonwoods at the mouth of the Tequesquite and along the Cimarron five miles northeast of Kenton, and took two males. In 1933, an immature male was taken at the mouth of the Tequesquite on September 21; several were seen in the cottonwoods west of Kenton along the New Mexico line on September 22; and an immature female was taken on a mesa-top about seven miles south of Kenton on September 25. This species is not listed by Mrs. Nice (1931).

108. **Hedymeles melanocephalus** (Swainson). BLACK-HEADED GROSBIRD.

Noted only in the far western Panhandle, on September 24, 1932, when a male specimen was taken in a clump of cottonwoods along the Cimarron about three miles northeast of Kenton. This specimen presumably is of the northern race, *H. m. melanocephalus*.

109. **Guiraca caerulea** (Linnaeus). BLUE GROSBIRD.

Recorded once, along the New Mexico State line, west of Kenton, on September 28, 1932, when an immature male was taken from a clump of wild sunflowers not far from the Carrizoso. Immature specimens probably are not subspecifically identifiable, but Blue Grosbeaks of this region should be of the western race, *G. l. interfusa* Dwight and Griscom.

110. *Passerina amoena* (Say). LAZULI BUNTING.

Noted only in the far western Panhandle, once in 1932, when an immature male was taken near the mouth of the Tequesquite, on September 25; and several times in 1933, from September 20 to 28: September 20, an immature male taken; September 21, an immature female taken; and September 25, an adult male in fall plumage seen, all not far east of Kenton, Cimarron County.

111. *Spiza americana* (Gmelin). DICKCISSEL.

Recorded once, at Kenton, Cimarron County, on September 28, 1933, when a female bird was collected along the Cimarron River.

112. *Carpodacus mexicanus frontalis* (Say). COMMON HOUSE FINCH.

Noted only in the far western Panhandle, where we saw it daily about Kenton, Cimarron County, and where several specimens were taken. Practically all individuals collected by us were in the moult. The species was notably less common in 1933 than in 1932.

113. *Spinus pinus* (Wilson). PINE SISKIN.

We saw a Pine Siskin (subspecies?) flying about the cedars on a mesa-side four miles east of Kenton, Cimarron County, on September 28, 1933. This is our only record.

114. *Spinus tristis* (Linnaeus). AMERICAN GOLDFINCH.

Goldfinches of this species were identified with certainty only in the far western Panhandle, once in 1932, when on October 3 a specimen was taken along the Tequesquite, near Kenton, Cimarron County; and twice in 1933: on September 22, a flock of three flying over; and on September 27, two seen, one collected, at the Willson ranch twelve miles northeast of Kenton. Unfortunately neither of the specimens collected is subspecifically identifiable, for both are in the moult and are largely in winter plumage.

115. *Spinus psaltria* (Say). ARKANSAS GOLDFINCH.

Noted only in the far western Panhandle, on September 21 and 25, and on October 3, in 1932; and on September 23, 1933, when Mr. Tate saw three in his yard in Kenton. No specimen was collected. The subspecies found in the Black Mesa country presumably is *S. p. psaltria*.

116. **Oberholseria chlorura** (Audubon). GREEN-TAILED TOWHEE.

Recorded once, a single bird seen on September 28, 1933, in a dense patch of Russian thistle along the Cimarron River, not far from Kenton. It is regrettable that we did not collect this specimen, since the species apparently has not yet definitely been taken in the State.

117. **Pipilo maculatus arcticus** (Swainson). ARCTIC TOWHEE.

Noted only in the vicinity of Kenton, Cimarron County, where we recorded it from September 23 to October 4 in 1932 and from September 26 on in 1933, and took several specimens. These all are referable, apparently, to the same race, *P. m. arcticus*.

118. **Pipilo fuscus mesoleucus** Baird. CANYON TOWHEE.

Recorded only in the far western Panhandle where it was seen daily in and about Kenton, Cimarron County, and where a considerable series of specimens was taken. Most of these are in the moult. A female taken October 4, 1932, is still almost entirely in juvenal plumage.

119. **Calamospiza melanocorys** Stejneger. LARK BUNTING.

Recorded on one occasion, on September 23, 1932, when several immature birds were seen in company with a flock of Western Vesper Sparrows in a weed-patch along the New Mexico line west of Kenton, Cimarron County.

120. **Passerculus sandwichensis** (Gmelin). SAVANNAH SPARROW.

Identified with certainty only in the Kenton region, Cimarron County, where it was recorded from September 24 to October 1 in 1932, and on September 22, 1933, and where two specimens were taken. One of these (female, October 1, 1932) is plainly referable to *P. s. nevadensis* Grinnell; but the other (an embalmed specimen, sex ?, September 24, 1932) is not gray enough for *nevadensis* and bears closer resemblance to *P. s. alaudinus* Bonaparte. We have not yet had opportunity to compare this bird with winter specimens of *P. s. campestris* Taverner, a subspecies that might be expected as a transient or winter visitant in the Kenton region.

Sparrows seen here and there along the Panhandle plain were doubtless of the present species, but we had no opportunity to look at them closely nor to collect them.

121. *Ammodramus savannarum* (Gmelin). GRASSHOPPER SPARROW.

Recorded with certainty only in the vicinity of Kenton, Cimarron County, and only during 1932, when we collected three specimens, a female on September 23, and two males, on September 24 and 28 respectively. Mr. Todd, who has examined these specimens critically, has furnished me with the following measurements and comments: "Male, male—wing, 63, 64; tail, 46, 49; female—wing, 62, tail, 44. Thus they agree with *bimaculatus* in larger size, but with eastern *australis* in darker shade of color of the upper parts. The throat and breast are strongly buffy, the rest of the under parts white in abrupt contrast. The bills are darker than in other specimens we have."

122. *Passerherbulus henslowi* (Audubon). HENSLOW'S SPARROW.

We shot a Henslow's Sparrow along the headwaters of the Tequesquite, not far east of Kenton, Cimarron County, on October 3, 1932, but failed to retrieve the specimen. The subspecies found in this region should be the western one, *P. h. henslowi*.

123. *Poocetes gramineus* (Gmelin). VESPER SPARROW.

Vesper Sparrows observed by us in northeastern Oklahoma were probably of the eastern race, *P. g. gramineus*. Specimens collected in the vicinity of Kenton, Cimarron County, were, however, of the western race, *P. g. confinis* Baird. The species was recorded daily during both our visits.

124. *Chondestes grammacus* (Say). LARK SPARROW.

By the time we reached Oklahoma this species must have departed for the south, for we did not once record it in 1932, and we saw it but once in 1933—a single individual, at the head of the Tequesquite, east of Kenton, Cimarron County, on September 22. The subspecies found in the Kenton region should be the western one, *C. g. strigatus* Swainson.

125. *Aimophila ruficeps eremoeca* (Brown). ROCK SPARROW.

Recorded only in the Black Mesa section of Cimarron County, where we took four specimens in 1932: a male and female, in post-nuptial moult, on September 22, a juvenal male on September 24,

and a juvenal female on September 29; and where we saw it once in 1933—on September 23, a single bird, in the midst of the moult.

These sparrows were quiet creatures at this season, and we located them with difficulty. As a rule they were to be found along the rims of the mesas, among big boulders and at the bases of cliffs, where they ran about with tails lifted high, much in the manner of Song Sparrows.

126. *Junco hyemalis* (Linnaeus). SLATE-COLORED JUNCO.

We did not see many Juncos. We probably left Oklahoma before they had made their way southward thus far. The present species we recorded with certainty only once, at Guymon, Texas County, on October 5, 1932, when a male (?) bird, one of two gray-colored juncos seen in weeds strewn along the highway-fence, was collected. This specimen perfectly matches winter specimens of the well-known eastern bird, *J. h. hyemalis*, though it was not so identified at first.

127. *Junco oreganus montanus* Ridgway. MONTANA JUNCO.

A female specimen of *Junco oreganus* was collected near Kenton, Cimarron County, on October 3, 1932—the only junco seen that day. Mr. Joseph H. Riley, of the U. S. National Museum, considers this specimen closer to *montanus* than to any other race of the species.

128. *Junco mearnsi* Ridgway. PINK-SIDED JUNCO.

Two female juncos, taken from a flock of three seen on a mesa-top south of Kenton, Cimarron County, on September 29, 1933, are of this species. Both are in fresh, clean plumage, and while they do not exactly match they are apparently closer to this form than to any other.

It is our belief that a single junco noted along the Tequesquite on September 22, 1933, was of the present species, but the bird was not collected. Field identification of most of the juncos said to be found about Kenton is practically impossible.

129. *Spizella passerina* (Bechstein). CHIPPING SPARROW.

Identified with certainty only in the Black Mesa country of Cimarron County, where we found it a common bird during both 1932 and 1933 and collected several specimens. All these are apparently of the western race, *S. p. arizonae* Coues.

130. *Spizella pallida* (Swainson). CLAY-COLORED SPARROW.

Identified with certainty only about Kenton, Cimarron County, where we found it to be common during both 1932 and 1933, and where we took several specimens, many of these in the postjuvencal moult or in perfect juvenal plumage.

131. *Spizella breweri* Cassin. BREWER'S SPARROW.

We noted this species several times (though not always with certainty) in the vicinity of Kenton, Cimarron County, and took four specimens during our 1932 visit: two on September 24 and two on September 28, from a grassy meadow or flat between two mesas just west of Kenton. These are presumably of the well-known race, *S. b. breweri*, but they have not been compared with winter specimens of the Timberline Sparrow, *S. b. taverneri* Swarth and Brooks.

132. *Zonotrichia leucophrys* (Forster). WHITE-CROWNED SPARROW.

White-crowned Sparrows observed by us in northern Oklahoma on our return east in 1933 were perhaps of the well-known eastern race, *Z. l. leucophrys*. Birds collected in the vicinity of Kenton, Cimarron County (two males, one female), were all Gambel's Sparrows, *Z. l. gambeli* (Nuttall), however. We noted the species about Kenton almost daily.

133. *Zonotrichia albicollis* (Gmelin). WHITE-THROATED SPARROW.

Noted only in the vicinity of Laverne, Harper County, where on September 20, 1932, a small flock was observed and one specimen was collected to make our identification certain.

134. *Melospiza lincolni* (Audubon). LINCOLN'S SPARROW.

We took a male from a small flock encountered near Laverne, Harper County, on September 20, 1932. During the same year we recorded the species in the vicinity of Kenton, Cimarron County, on September 30 (one seen) and on October 3 (male collected). In 1933 we noted it only near Kenton, on September 28, when two were secured from the many that we saw along the Cimarron River. A migrating flock must have come in during the night. Specimens collected are referable to the eastern race, *M. l. lincolni*.

135. *Melospiza melodia* (Wilson). SONG SPARROW.

We observed this species only in the vicinity of Kenton, Cimarron County, where it was decidedly rare. We took three specimens, a male on September 23, 1932, and two females on October 3, 1932. All these are closer to *M. m. fallax* (Baird) than to any other form of the species. According to Mrs. Nice (1931, 193) the Mountain Song Sparrow has been taken in the State only once previously, in Canadian County.

136. *Rhynchophanes mccowni* (Lawrence). McCOWN'S LONGSPUR.

Recorded with certainty only twice, on September 24, 1932, when a flock of ten was seen on the prairie just east of the mesa-country in Cimarron County; and on September 26, 1932, when a single bird was seen on the Charles A. Kirtley ranch, about ten miles southwest of Kenton.